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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,814	08/21/2003	Lucien A. Couvillon JR.	S13.12-0146	7877

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EXAMINER

AGARWAL, MANUJ

ART UNIT	PAPER NUMBER
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3764

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/645,814

Applicant(s)

COUVILLON, LUCIEN A.

Examiner

Manuj Agarwal

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 21 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12-17-04</u>
<u>10-8-03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The BACKGROUND OF THE INVENTION should be arranged to include the following titles:

- (1) Field of the Invention.
- (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

Please insert the title Description of Related Art in line 16 on page 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1,5-7,15-21,24,25 are rejected under 35 U.S.C. 102(a) as being anticipated by Brown, III (US 6,123,681).

Regarding claims 1,7,15,17-19,25 Brown III discloses a system comprising a garment-covering member 10 coupled to a plurality of polymer strips 120 that contract upon the delivery of an electrical stimulus (col. 4 lines 26-42) and thus constitute a plurality of electroactive polymer (EAP) actuators. The covering member is further said to be made of an elastomeric, or flexible material (col. 5 lines 35-40). In this arrangement, the system is capable of exerting force on an exterior treatment portion of a user's body.

Regarding claims 5,21, the actuators 100 are further said to be woven into the covering member (col. 5 lines 35-36).

Regarding claims 6,16, the system of Brown III includes wires for supplying an electrical stimulus to the EAP actuators (col. 3 lines 10-12). The electrical current that ends at the actuators originate from an automatic control means (col. 6 lines 1-2). This controller provides a drive signal to drive the actuation of the EAP actuators. The electrical drive signal will cause the actuators 110 to change shape and compress the covering member.

Regarding claim 20, the covering member is said to be composed of a nylon material. Nylon is a type of fabric.

Regarding claim 24, the actuators are said to be incorporated into the covering member by placement in pockets (col. 5 lines 32-35). A pocket constitutes multiple layers of fabric.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4, 22,23 are rejected under 35 U.S.C. 103(a) as being obvious over Brown, III.

The actuators are said to be incorporated into the covering member by weaving it into the covering material, be places in pockets, or attached directly to it (col. 5 lines 32-

35). Although the reference does not explicitly state that the actuators are stitched or glued into the covering member, it would have been obvious to provide an alternate method of incorporation since it would result in an identical objective. Both methods would provide a rigid connection.

Claims 8-14,26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown, III in view of Shabty et al (US 2005/0137507).

Regarding claim 8,9,26,27 the Brown, III reference lacks a heart sensor for sensing a sinus rhythm of the heart. Shabty et al. discloses a counterpulsation device that comprises an EKG sensor (paragraph 52), a device that measures the sinus rhythm, or electrical conductance of the heart. Shabty et al teaches the advantage of timing the limb compression with the heart rate to increase the affects of blood flow return. Thus, the device provides a drive signal based on the heart sensor signal. It would have been obvious to one of ordinary skill at the time the invention was made to provide the counterpulsation device of Brown, III with a heart rate sensor as taught by Shabty et al in order to sense the sinus rhythm of the heart and to cause simultaneous compression.

Regarding claims 10-14,28,29, Brown, III reference lacks a feedback component that senses a feedback characteristic. The counterpulsation device of Shabty et al comprises an EKG 100 and a pulse oximetry measurement system 102 to obtain the user's blood pressure and heart rate, both of which are metabolic feedback components. A plethysmograph is included (paragraph 52) to determine circulatory capacity, or blood flow, of a limb. The timing of the inflation and deflation of the covering

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member is coordinated with the patient's natural blood flow (paragraph 62). In other words, a drive signal is provided by a controller based on the feedback signal received. It would have been obvious to one of ordinary skill at the time the invention was made to provide the system of Brown, III with the aforementioned feedback sensors for sensing a feedback characteristic as taught by Shabty et al in order to provide a means to obtain a user's vital information and to apply appropriate treatment.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-14,16,17 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-15 of copending Application No. 10/373,940. Although the conflicting claims are not identical,

they are not patentably distinct from each other because they claim identical subject matter.

Regarding claim 1, the “compressor” 102 of claim 1 of the copending claims (hereon referenced as “reference B”) is defined to comprise receiver 108 of claim 6 that covers the exterior treatment portion of the user’s body and therefore comprehends the claims. This “covering member” is claimed to have an electroactive polymer (EAP) actuator coupled to it. Due to the fact that Claim 2 of reference B states that an electrical driver is operably connected to the EAP actuator, the EAP actuator is operably connected to the covering member.

Regarding claims 3,5 see claims 8,10 of reference B.

Regarding claim 6, the computing device of claim 5 is said to be selected from a variety of computing devices, as well as a dedicated special-purpose electronic control device. This “controller” is claimed to provide a drive signal to actuate the EAP actuator.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 15,18-29 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-15 of copending Application No. 10/373,940 in view of Brown and Shabty et al.

Regarding claims 15,18-20,25 the copending claims lack a covering member that comprises a fabric garment. Brown III discloses a system comprising a garment-covering member 10 coupled to a plurality of polymer strips 120 that contract upon the delivery of an electrical stimulus (col. 4 lines 26-42) and thus constitute a plurality of

electroactive polymer (EAP) actuators. The covering member is further said to be made of an elastomeric, or flexible material (col. 5 lines 35-40). It would have been obvious to one of ordinary skill at the time the invention was made to provide the apparatus of the copending claims with a fabric garment material to facilitate the identical claimed function to an exterior portion of a user's body.

Regarding claim 21, the actuators of Brown are further said to be woven into the covering member (col. 5 lines 35-36).

Regarding claims 22-24, the copending claims lack incorporation of actuators into a garment covering member. The actuators are said to be incorporated into the covering member of Brown by weaving it into the covering material, placing them in pockets, or attaching them directly to it (col. 5 lines 32-35). A pocket constitutes multiple layers of fabric. Although the reference does not explicitly state that the actuators are stitched or glued into the covering member, it would have been obvious to provide incorporate the actuators of the copending claims by an alternate method of incorporation since it would result in an identical objective.

Regarding claims 26,27, the Brown, III reference lacks a heart beat sensor. Shabty et al. discloses a counterpulsation device that comprises an EKG sensor (paragraph 52), a device that measures the sinus rhythm, or electrical conductance of the heart. Shabty et al teaches the advantage of timing the limb compression with the heart rate to increase the affects of blood flow return. Thus, the device provides a drive signal based on the heart senor signal. It would have been obvious to one of ordinary skill at the time the invention was made to provide the counterpulsation device

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compending claims in view Brown, III with a heart rate sensor as taught by Shabty et al in order to sense the sinus rhythm of the heart and to cause simultaneous compression.

Regarding claims 28,29 the compending claims in view of Brown, III lacks a sensor for a biological characteristic indicative of an efficaciousness of the counterpulsation pressure. The counterpulsation device of Shabty et al comprises an EKG 100 and a pulse oximetry measurement system 102 to obtain the user's blood pressure and heart rate. A plethysmograph is included (paragraph 52) to determine the circulatory capacity, or blood flow, of a limb. The timing of the inflation and deflation of the covering member is coordinated with the patient's natural blood flow (paragraph 62). In other words, a drive signal is provided by a controller based on the biological sensor signal received. It would have been obvious to one of ordinary skill at the time the invention was made to provide the device of the compending claims in view of Brown, III with the aforementioned sensor for sensing a biological characteristic as taught by Shabty et al in order to provide a means to obtain a user's vital information and to apply appropriate treatment.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. US 6,809,462. Pelrine, et al. Electroactive Polymer Sensors. A covering member with a plurality of EAP actuators that contract upon delivery of an electrical stimulus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manuj Agarwal whose telephone number is (571) 272-4368. The examiner can normally be reached on Mon to Fri 9:00 AM 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory L. Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Manuj Agarwal
Patent Examiner

MA



Danton D. DeMille
Primary Examiner